

Southern pygmy clubtail

Lanthus vernalis

Status

Federal status: G4 N4

NH state status: Not ranked or listed

ME state status: S?, Special Concern

Local experts provided input through e-mail and letters instead of a panel. One of two experts who commented on this species indicated it should be a species of concern because it is at the edge of its range here and may be at greater risk as a result. The other commentor is unfamiliar with its local status.

Distribution

Distribution data is limited. However, currently the species is known in the eastern United States in most states from Georgia north to Ohio and northeast to Maine.

This species is not known to occur in New Hampshire, but recent surveys of odonates have been very limited. Three occurrences have been documented in Maine, in Hershey TWP, Brownfield, and Thorndike Twp. The Brownfield occurrence is near the WMNF. A local expert believes it is on the WMNF, just not yet documented.

Habitat

Breeds in small, shady spring-fed creeks, preferring clean sand or mud substrates and shallow, oligotrophic, running water. *Lanthus vernalis* larvae are commonly found under and around pancake-sized rocks. Adult habitat is not addressed in the literature, so is assumed to be the area adjacent to suitable breeding habitat.

Limiting Factors

Lanthus vernalis seems to be intolerant of excessive sedimentation. This implies that erosion resulting in increased sedimentation in streams could be detrimental to the species.

This species prefers shaded stream habitats. Based on that preference, removal of canopy over suitable stream habitat could make that habitat unsuitable.

Predation by fish and water pollution could limit populations of this species.

Viability concern

Habitat with suitable substrates is limited on the WMNF, occurring in short stretches of streams. This species is likely on the Forest. Given limited habitat, it is probably uncommon to rare on Forest. Some management activities could affect habitat suitability, and no other species has similar habitat requirements, so it was kept on the list to track potential impacts.

Management activities that might affect viability

Roads, heavy foot traffic on trails, and development of facilities can cause or increase erosion. If these activities occurred near suitable habitat, they could impact

sedimentation levels and habitat suitability. Mitigation measures to limit or eliminate sedimentation to streams would help protect this species' habitat. Removal of man-made or beaver dams just upstream of suitable habitat could impact this species if larvae are present by increasing sediment levels for a period of time. It is unknown how long larvae remain in stream habitats. Instream habitat improvement projects can create sediment and alter stream habitat.

Dam construction just downstream could eliminate suitable running water habitat. Similarly, management to encourage beaver activity downstream of suitable habitat, if successful, could reduce available habitat.

Removal of canopy over breeding habitat could reduce or eliminate habitat suitability. *Lanthus vernalis* appears to prefer shady stream habitats, but what canopy closure level qualifies as shady is unknown. Regeneration harvest adjacent to a suitable stream likely would reduce habitat suitability. Whether thinning or other partial harvests adjacent to breeding habitat would impact habitat quality is unknown. Implementation of riparian standards and guidelines should minimize potential for impacts.

References

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